

APPLICATION SERIAL NO. 10/659.617

PATENT

### AMENDMENTS TO THE CLAIMS

The following listing of claims, in which claims 12-24 have been canceled, will replace all prior versions and listing of claims in the application.

#### *Listing of Claims*

Claim 1 (original): A sensor interface assembly for a blood pressure measurement device that determines blood pressure of an underlying artery, the sensor interface assembly comprising:

a base unit for pivotally attaching to the blood pressure measurement device;

a sensing unit including sensing means for sensing a blood pressure of each pulse as each pulse travels beneath the sensing means; and

means for detachably connecting the sensing unit to the base unit wherein the means for detachably connecting mechanically and electrically couple the sensing unit to the base unit.

Claim 2 (original): The sensor interface assembly of claim 1 wherein the means for detachably connecting comprises a plurality of electrical connectors connected to the sensing means, the connectors being received by a receptacle of the base unit.

Claim 3 (original): The sensor interface assembly of claim 2 wherein the means for detachably connecting further comprises an alignment element for aligning the electrical connectors with the receptacle.

Claim 4 (original): The sensor interface assembly of claim 2 wherein the electrical connectors provide power to the sensing unit and receive output signals from the sensing means.

Claim 5 (original): The sensor interface assembly of claim 1 wherein the sensing means of the sensing unit includes:

APPLICATION SERIAL NO. 10/659.617

PATENT

a pressure transducer having a sensing surface for sensing pulses of the underlying artery;

a flexible diaphragm having an active portion for transmitting blood pressure pulses of the underlying artery; and

interface means coupled between the sensing surface of the transducer and the flexible diaphragm for transmitting the blood pressure pulses within the underlying artery from the flexible diaphragm to the sensing surface of the transducer.

Claim 6 (original): The sensor interface assembly of claim 1 wherein the base unit further comprises a flexible ring for equalizing pressure around the sensing means.

Claim 7 (original): A non-invasive blood pressure measurement device for determining blood pressure of an artery, the device comprising:

a housing unit;

a base unit pivotally coupled to the housing unit, the base unit including electrical circuitry interconnected with the housing unit;

a sensing unit for sensing pulses of the underlying artery, the sensing unit being detachably connected to the base unit.

Claim 8 (original): The device of claim 7 wherein the sensing unit includes a plurality of electrical connectors which are received by a receptacle of the base unit to provide both electrical and mechanical connection of the sensing unit to the base unit.

Claim 9 (original): The device of claim 8 wherein the sensing unit further includes an alignment element for aligning the electrical connectors with the receptacle.

Claim 10 (original): The device of claim 8 wherein the electrical connectors provide power to the sensing unit and receive output signals from the sensing means.

APPLICATION SERIAL NO. 10/659.617

PATENT

Claim 11 (original): A sensor for a non-invasive blood pressure measurement device, the sensor for measuring blood pressure pulses within an underlying artery surrounded by tissue of a patient as the underlying artery is compressed, the sensor comprising:

a base unit for coupling to the blood pressure measurement device, the base unit including electrical circuitry, a flexible ring and a connection receptacle; and

a sensing unit comprising:

a pressure transducer for sensing pulses of the underlying artery, the transducer having a sensing surface;

a flexible diaphragm having an active portion for transmitting blood pressure pulses of the underlying artery;

interface means coupled between the sensing surface of the transducer and the flexible diaphragm for transmitting the blood pressure pulses within the underlying artery from the flexible diaphragm to the sensing surface of the transducer;

a compressible ring; and

connecting means for detachably connecting the sensing unit to the receptacle of the base unit.

Claims 12-24 (canceled)